

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	5229	((568/667) or (568/669) or (568/670) or (526/72) or (528/401) or (528/402) or (430/311)).CCLS.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2006/04/15 12:30
L2	7	norborn\$6 and (hexafluoropropanol or trifluoromethyl near2 carbinol)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2006/04/15 12:40
L3	0	l1 and l2	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2006/04/15 12:32
L4	7536	carr.in. or markley.in. or abdourazak.in. or marsella.in.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2006/04/15 12:41
L5	44228	carbocyclic	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2006/04/15 12:41
L6	27	l4 and l5	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	ON	2006/04/15 12:46

10/784,377

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1204rxw

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

\* \* \* \* \* Welcome to STN International \* \* \* \* \*

NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
NEWS	2		"Ask CAS" for self-help around the clock
NEWS	3	DEC 23	New IPC8 SEARCH, DISPLAY, and SELECT fields in USPATFULL/ USPAT2
NEWS	4	JAN 13	IPC 8 searching in IFIPAT, IFIUDB, and IFICDB
NEWS	5	JAN 13	New IPC 8 SEARCH, DISPLAY, and SELECT enhancements added to INPADOC
NEWS	6	JAN 17	Pre-1988 INPI data added to MARPAT
NEWS	7	JAN 17	IPC 8 in the WPI family of databases including WPIFV
NEWS	8	JAN 30	Saved answer limit increased
NEWS	9	FEB 21	STN AnaVist, Version 1.1, lets you share your STN AnaVist visualization results
NEWS	10	FEB 22	The IPC thesaurus added to additional patent databases on STN
NEWS	11	FEB 22	Updates in EPFULL; IPC 8 enhancements added
NEWS	12	FEB 27	New STN AnaVist pricing effective March 1, 2006
NEWS	13	FEB 28	MEDLINE/LMEDLINE reload improves functionality
NEWS	14	FEB 28	TOXCENTER reloaded with enhancements
NEWS	15	FEB 28	REGISTRY/ZREGISTRY enhanced with more experimental spectral property data
NEWS	16	MAR 01	INSPEC reloaded and enhanced
NEWS	17	MAR 03	Updates in PATDPA; addition of IPC 8 data without attributes
NEWS	18	MAR 08	X.25 communication option no longer available after June 2006
NEWS	19	MAR 22	EMBASE is now updated on a daily basis
NEWS	20	APR 03	New IPC 8 fields and IPC thesaurus added to PATDPAFULL
NEWS	21	APR 03	Bibliographic data updates resume; new IPC 8 fields and IPC thesaurus added in PCTFULL
NEWS	22	APR 04	STN AnaVist \$500 visualization usage credit offered
NEWS	23	APR 12	LINSPEC, learning database for INSPEC, reloaded and enhanced
NEWS	24	APR 12	Improved structure highlighting in FQHIT and QHIT display in MARPAT
NEWS	25	APR 12	Derwent World Patents Index to be reloaded and enhanced during second quarter; strategies may be affected
NEWS EXPRESS	FEBRUARY 15 CURRENT VERSION FOR WINDOWS IS V8.01a, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 19 DECEMBER 2005. V8.0 AND V8.01 USERS CAN OBTAIN THE UPGRADE TO V8.01a AT <a href="http://download.cas.org/express/v8.0-Discover/">http://download.cas.org/express/v8.0-Discover/</a>		
NEWS HOURS	STN Operating Hours Plus Help Desk Availability		
NEWS LOGIN	Welcome Banner and News Items		
NEWS IPC8	For general information regarding STN implementation of IPC 8		

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer

10/784,377

agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

\*\*\*\*\* STN Columbus \*\*\*\*\*

FILE 'HOME' ENTERED AT 13:08:37 ON 15 APR 2006

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'REGISTRY' ENTERED AT 13:08:53 ON 15 APR 2006

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2006 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 13 APR 2006 HIGHEST RN 880388-58-9

DICTIONARY FILE UPDATES: 13 APR 2006 HIGHEST RN 880388-58-9

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

\*\*\*\*\*  
\*  
\* The CA roles and document type information have been removed from \*  
\* the IDE default display format and the ED field has been added, \*  
\* effective March 20, 2005. A new display format, IDERL, is now \*  
\* available and contains the CA role and document type information. \*  
\*  
\*\*\*\*\*

Structure search iteration limits have been increased. See HELP SLIMITS for details.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

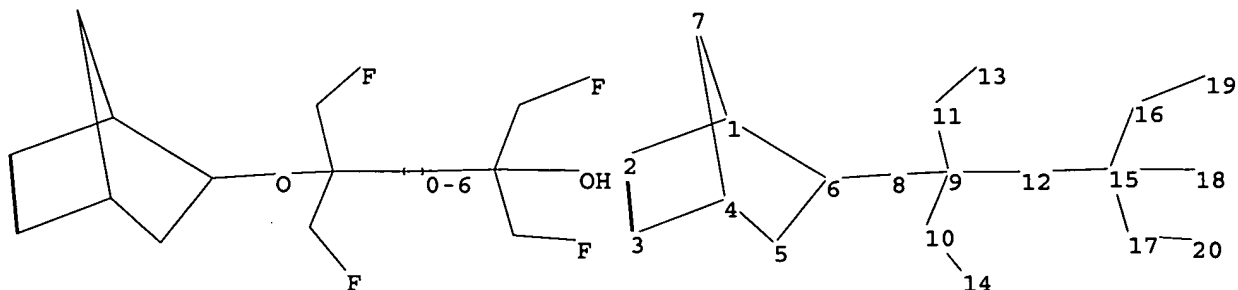
=> ....Testing the current file.... screen

ENTER SCREEN EXPRESSION OR (END):end

=>

Uploading C:\Documents and Settings\rkeys\My Documents\STNEXP4\TEMPLATE\STANDARD\10784377.str

10/784,377



chain nodes :

8 9 10 11 12 13 14 15 16 17 18 19 20

ring nodes :

1 2 3 4 5 6 7

chain bonds :

6-8 8-9 9-10 9-11 9-12 10-14 11-13 12-15 15-16 15-17 15-18 16-19 17-20

ring bonds :

1-2 1-6 1-7 2-3 3-4 4-5 4-7 5-6

exact/norm bonds :

6-8 8-9 15-18

exact bonds :

1-2 1-6 1-7 2-3 3-4 4-5 4-7 5-6 9-10 9-11 9-12 10-14 11-13 12-15

15-16 15-17 16-19 17-20

isolated ring systems :

containing 1 :

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:CLASS 9:CLASS 10:CLASS

11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:CLASS

19:CLASS 20:CLASS

L1 STRUCTURE UPLOADED

=> que L1

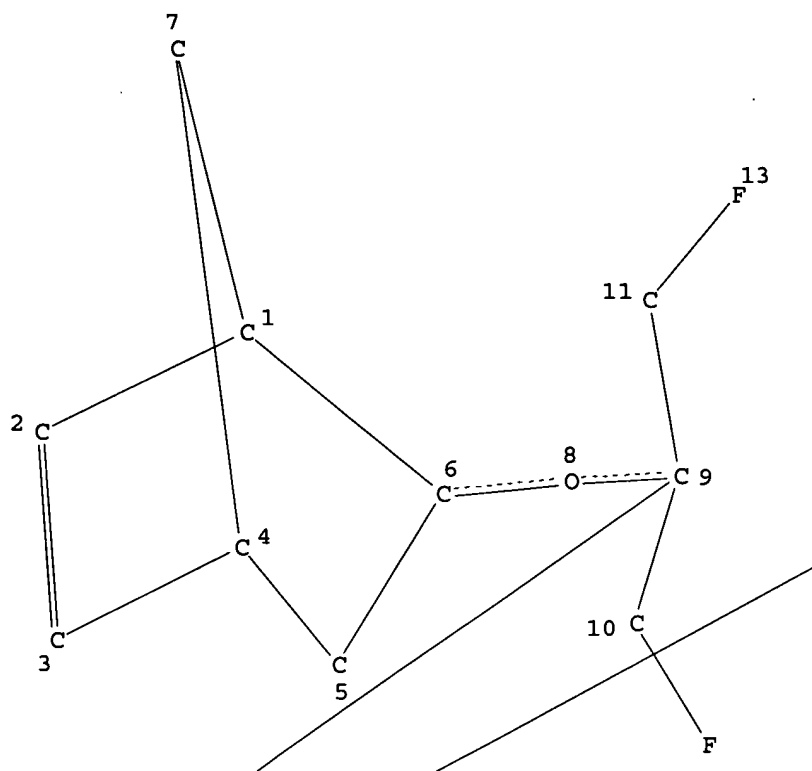
L2 QUE L1

=> d

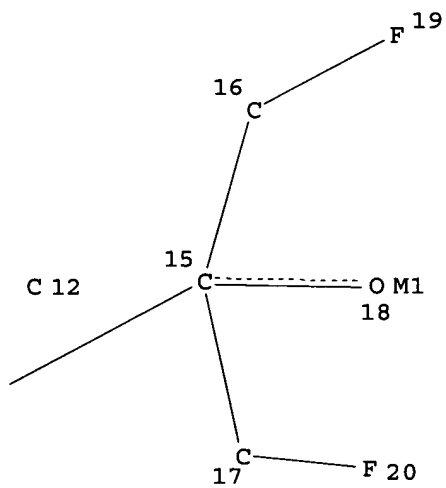
L2 HAS NO ANSWERS

L1 STR

10/784,377



Page 1-A



Page 1-B



G20  
21

Page 2-A

REP G20=(0-6) 12-9 12-15

NODE ATTRIBUTES:

HCOUNT	IS M1	AT	18
NSPEC	IS R	AT	1
NSPEC	IS R	AT	2
NSPEC	IS R	AT	3
NSPEC	IS R	AT	4
NSPEC	IS R	AT	5
NSPEC	IS R	AT	6
NSPEC	IS R	AT	7
NSPEC	IS C	AT	8
NSPEC	IS C	AT	9
NSPEC	IS C	AT	10
NSPEC	IS C	AT	11
NSPEC	IS C	AT	12
NSPEC	IS C	AT	13
NSPEC	IS C	AT	14
NSPEC	IS C	AT	15
NSPEC	IS C	AT	16
NSPEC	IS C	AT	17
NSPEC	IS C	AT	18
NSPEC	IS C	AT	19
NSPEC	IS C	AT	20
NSPEC	IS C	AT	21

DEFAULT MLEVEL IS ATOM

MLEVEL IS CLASS AT 8 9 10 11 12 13 14 15 16 17 18 19 20

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC I

NUMBER OF NODES IS 21

STEREO ATTRIBUTES: NONE

L2 QUE L1

=&gt; s 12

SAMPLE SEARCH INITIATED 13:09:19 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 2 TO ITERATE

100.0% PROCESSED 2 ITERATIONS

SEARCH TIME: 00.00.01

1 ANSWERS

```

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:   2 TO      124
PROJECTED ANSWERS:      1 TO      80

```

=> d scan

CC(F)(C(F)(F)F)C(C(F)(F)F)C(F)(F)F

ALL ANSWERS HAVE BEEN SCANNED

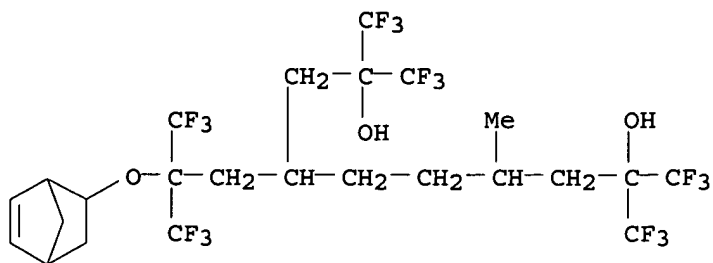
```
=> s. l2 ful
FULL SEARCH INITIATED 13:09:58 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -      55 TO ITERATE
```

L4 34 SEA SSS FUL L1

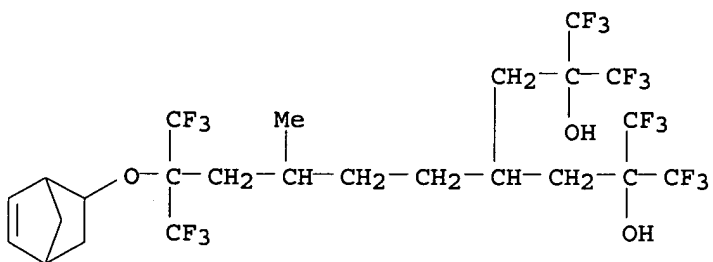
=> d scan

CM 1

10/784,377



CM 2



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

167.38

167.59

FILE 'CAPLUS' ENTERED AT 13:10:19 ON 15 APR 2006

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 15 Apr 2006 VOL 144 ISS 17

FILE LAST UPDATED: 14 Apr 2006 (20060414/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/infopolicy.html>

=> s 14

L5

2 L4

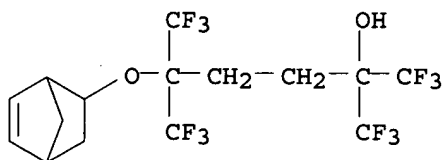


10/784,377

=> d 1-2 bib fhitr

L5 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN  
AN 2005:116079 CAPLUS  
DN 142:198489  
TI Bridged carbocyclic compounds, their preparation, and use in polymerization  
IN Van Court, Carr Richard; Markley, Thomas John; Abdourazak, Atteye Houssein; Marsella, John Anthony  
PA Air Products and Chemicals, Inc., USA  
SO Eur. Pat. Appl., 61 pp.  
CODEN: EPXXDW  
DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1505050	A1	20050209	EP 2004-18304	20040802
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
	US 2005037289	A1	20050217	US 2004-784377	20040223
	SG 108958	A1	20050228	SG 2004-4281	20040728
	JP 2005053914	A2	20050303	JP 2004-228514	20040804
PRAI	US 2003-492573P	P	20030804		
	US 2004-784377	A	20040223		
OS	MARPAT 142:198489				
IT	838848-01-4P				
	RL: IMF (Industrial manufacture); PREP (Preparation) (bridged carbocyclic compds., their preparation, and use in polymerization)				
RN	838848-01-4 CAPLUS				
CN	2-Hexanol, 5-(bicyclo[2.2.1]hept-5-en-2-yloxy)-1,1,1,6,6,6-hexafluoro-2,5-bis(trifluoromethyl)-, homopolymer (9CI) (CA INDEX NAME)				
CM	1				
CRN	838847-28-2				
CMF	C15 H14 F12 O2				

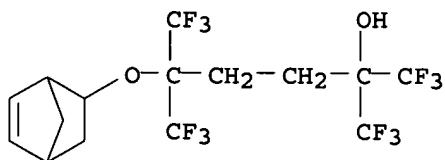


RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN  
AN 2004:491231 CAPLUS  
DN 142:490275  
TI Novel reactions of quadricyclane. A new route to monomers for low-absorbing polymers in 157 nm photoresists  
AU Marsella, John A.; Abdourazak, Atteye H.; Carr, Richard V. C.; Markley, Thomas J.; Robertson III, Eric A.  
CS Corporate Science and Technology Center, Air Products and Chemicals, Inc., Allentown, PA, 18195, USA  
SO Proceedings of SPIE-The International Society for Optical Engineering (2004), 5376(Pt. 1, Advances in Resist Technology and Processing XXI), 266-275

10/784,377

CODEN: PSISDG; ISSN: 0277-786X  
PB SPIE-The International Society for Optical Engineering  
DT Journal  
LA English  
IT 838848-01-4P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(preparation and properties of polymerized norbornene ethers obtained by  
reactions of quadricyclane with fluorinated diols for use in 157 nm  
photoresist formulations)  
RN 838848-01-4 CAPLUS  
CN 2-Hexanol, 5-(bicyclo[2.2.1]hept-5-en-2-yloxy)-1,1,1,6,6,6-hexafluoro-2,5-  
bis(trifluoromethyl)-, homopolymer (9CI) (CA INDEX NAME)  
  
CM 1  
  
CRN 838847-28-2  
CMF C15 H14 F12 O2



RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> file stnguide  
COST IN U.S. DOLLARS  
  
FULL ESTIMATED COST

SINCE FILE	TOTAL
ENTRY	SESSION
8.86	176.45

FILE 'STNGUIDE' ENTERED AT 13:12:28 ON 15 APR 2006  
USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT  
COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY, JAPAN SCIENCE  
AND TECHNOLOGY CORPORATION, AND FACHINFORMATIONSZENTRUM KARLSRUHE

FILE CONTAINS CURRENT INFORMATION.  
LAST RELOADED: Apr 7, 2006 (20060407/UP).

=> file reg  
COST IN U.S. DOLLARS  
  
FULL ESTIMATED COST

SINCE FILE	TOTAL
ENTRY	SESSION
1.14	177.59

FILE 'REGISTRY' ENTERED AT 13:23:48 ON 15 APR 2006  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2006 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file  
provided by InfoChem.

STRUCTURE FILE UPDATES: 13 APR 2006 HIGHEST RN 880388-58-9  
DICTIONARY FILE UPDATES: 13 APR 2006 HIGHEST RN 880388-58-9

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

10/784,377

Please note that search-term pricing does apply when conducting SmartSELECT searches.

```
*****
*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added,   *
* effective March 20, 2005. A new display format, IDERL, is now    *
* available and contains the CA role and document type information. *
*
*****
```

Structure search iteration limits have been increased. See HELP SLIMITS for details.

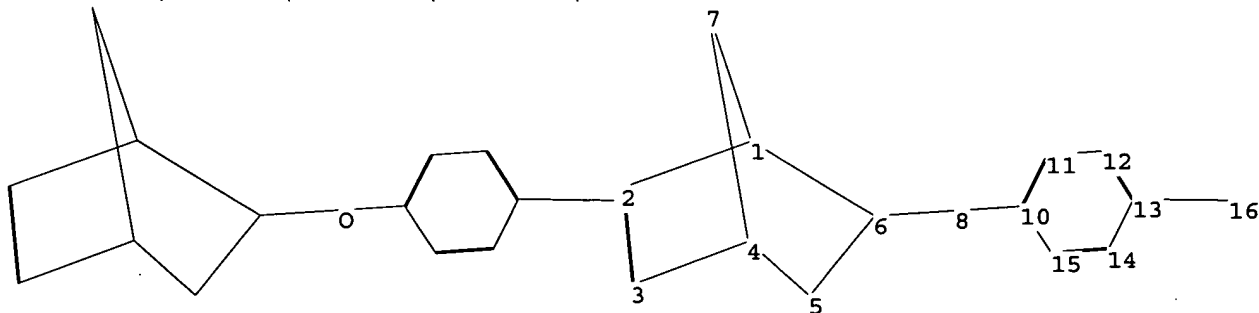
REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

=> ....Testing the current file.... screen

ENTER SCREEN EXPRESSION OR (END):end

=>  
Uploading C:\Documents and Settings\rkeys\My  
Documents\STNEXP4\TEMPLATE\STANDARD\10784377a.str



chain nodes :

8 16

ring nodes :

1 2 3 4 5 6 7 10 11 12 13 14 15

chain bonds :

6-8 8-10 13-16

ring bonds :

1-2 1-6 1-7 2-3 3-4 4-5 4-7 5-6 10-11 10-15 11-12 12-13 13-14 14-15

exact/norm bonds :

6-8 8-10

exact bonds :

1-2 1-6 1-7 2-3 3-4 4-5 4-7 5-6 13-16

normalized bonds :

10-11 10-15 11-12 12-13 13-14 14-15

isolated ring systems :

containing 1 : 10 :

Match level :

10/784,377

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:CLASS 10:Atom 11:Atom  
12:Atom 13:Atom 14:Atom 15:Atom 16:CLASS

L6 STRUCTURE UPLOADED

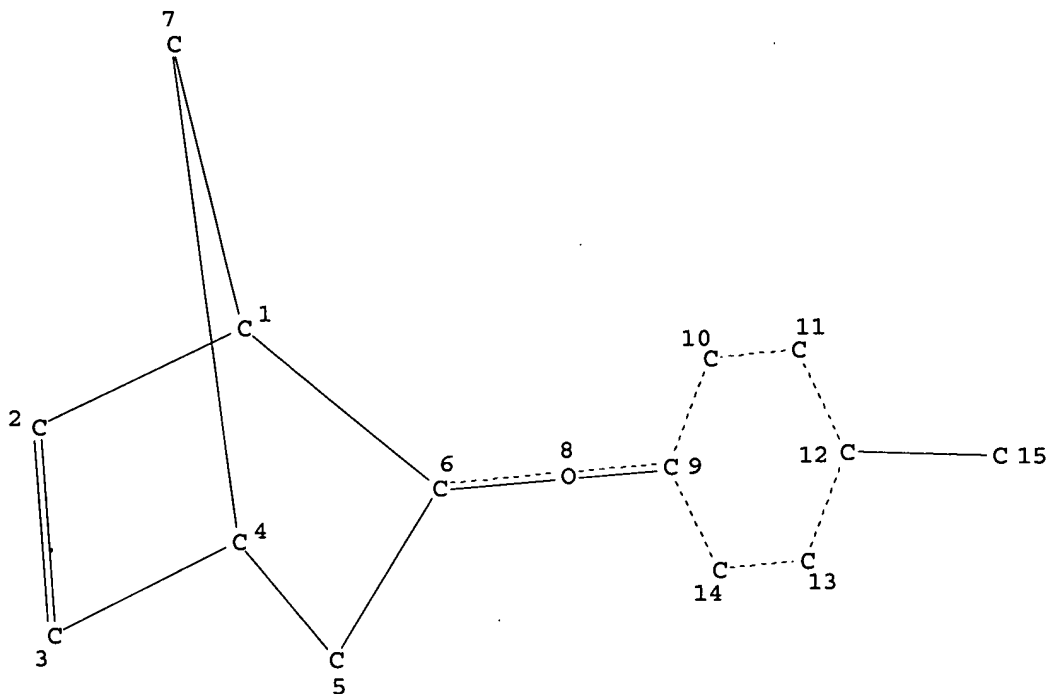
=> que L6

L7 QUE L6

=> d

L7 HAS NO ANSWERS

L6 STR



NODE ATTRIBUTES:

NSPEC	IS R	AT	1
NSPEC	IS R	AT	2
NSPEC	IS R	AT	3
NSPEC	IS R	AT	4
NSPEC	IS R	AT	5
NSPEC	IS R	AT	6
NSPEC	IS R	AT	7
NSPEC	IS C	AT	8
NSPEC	IS R	AT	9
NSPEC	IS R	AT	10
NSPEC	IS R	AT	11
NSPEC	IS R	AT	12
NSPEC	IS R	AT	13
NSPEC	IS R	AT	14
NSPEC	IS C	AT	15

DEFAULT MLEVEL IS ATOM

MLEVEL IS CLASS AT 8 15

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

10/784,377

RSPEC I

NUMBER OF NODES IS 15

STEREO ATTRIBUTES: NONE

L7 QUE L6

=> s l7

SAMPLE SEARCH INITIATED 13:24:51 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 90 TO ITERATE

100.0% PROCESSED 90 ITERATIONS

1 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 1231 TO 2369

PROJECTED ANSWERS: 1 TO 80

L8 1 SEA SSS SAM L6

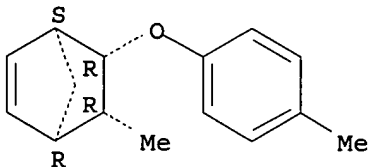
=> d scan

L8 1 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN

IN Bicyclo[2.2.1]hept-2-ene, 5-methyl-6-(4-methylphenoxy)-,  
(1R,4S,5S,6S)-rel- (9CI)

MF C15 H18 O

Relative stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

ALL ANSWERS HAVE BEEN SCANNED

=> s l7 ful

FULL SEARCH INITIATED 13:25:07 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 2147 TO ITERATE

100.0% PROCESSED 2147 ITERATIONS

12 ANSWERS

SEARCH TIME: 00.00.01

L9 12 SEA SSS FUL L6

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

167.38

344.97

FILE 'CAPLUS' ENTERED AT 13:25:14 ON 15 APR 2006

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

10/784,377

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 15 Apr 2006 VOL 144 ISS 17  
FILE LAST UPDATED: 14 Apr 2006 (20060414/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/infopolicy.html>

=> s 19

L10 7 L9

=> d scan

L10 7 ANSWERS CAPLUS COPYRIGHT 2006 ACS on STN  
CC 35 (Noncondensed Aromatic Compounds)  
TI Simple vinyl ethers in diene synthesis. I. Reaction of vinyl ethers of phenol, cresols, and halophenols with hexachlorocyclopentadiene  
IT 766-94-9, Ether, phenyl vinyl  
(derivs., reaction with hexachlorocyclopentadiene)  
IT 1126-20-1, Phenol, o-(allyloxy)- 1441-03-8, 2-Norbornene, 1,2,3,4,7,7-hexachloro-5-phenoxy- 1961-52-0, 2-Norbornene, 1,2,3,4,7,7-hexachloro-5-(o-fluorophenoxy)- 4218-87-5, Benzene, o-bis(allyloxy)- 91693-16-2, 2-Norbornene, 1,2,3,4,7,7-hexachloro-5-(2,4,6-trichlorophenoxy)- 91821-64-6, 2-Norbornene, 1,2,3,4,7,7-hexachloro-5-(2,4-dichlorophenoxy)- 91822-39-8, 2-Norbornene, 1,2,3,4,7,7-hexachloro-5-(o-chlorophenoxy)- 91822-40-1, 2-Norbornene, 1,2,3,4,7,7-hexachloro-5-(p-chlorophenoxy)- 92153-59-8, 2-Norbornene, 1,2,3,4,7,7-hexachloro-5-(o-tolyloxy)- 92153-60-1, 2-Norbornene, 1,2,3,4,7,7-hexachloro-5-(p-tolyloxy)- 92960-93-5, 2-Norbornene, 5-(p-bromophenoxy)-1,2,3,4,7,7-hexachloro- 93534-35-1, 2-Norbornene, 1,2,3,4,7,7-hexachloro-5-(m-tolyloxy)- 97176-63-1, Triethylamine, 2-(2,6-dimethoxyphenoxy)- 97176-64-2, Triethylamine, 2-(2,6-dimethoxyphenoxy)-, hydrochloride  
(preparation of)  
IT 766-94-9, Ether, phenyl vinyl  
(reaction with hexachlorocyclopentadiene)  
IT 77-47-4, Cyclopentadiene, hexachloro-  
(reactions of, with Ph vinyl ether and derivs.)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=> photoresist and l10

PHOTORESIST IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system.

For a list of commands available to you in the current file, enter "HELP COMMANDS" at an arrow prompt (=>).

=> s photoresist and l10

42482 PHOTORESIST

L11 0 PHOTORESIST AND L10

10/784,377

=> d his

(FILE 'HOME' ENTERED AT 13:08:37 ON 15 APR 2006)

FILE 'REGISTRY' ENTERED AT 13:08:53 ON 15 APR 2006

L1 STRUCTURE UPLOADED  
L2 QUE L1  
L3 1 S L2  
L4 34 S L2 FUL

FILE 'CAPLUS' ENTERED AT 13:10:19 ON 15 APR 2006

L5 2 S L4

FILE 'STNGUIDE' ENTERED AT 13:12:28 ON 15 APR 2006

FILE 'REGISTRY' ENTERED AT 13:23:48 ON 15 APR 2006

L6 STRUCTURE UPLOADED  
L7 QUE L6  
L8 1 S L7  
L9 12 S L7 FUL

FILE 'CAPLUS' ENTERED AT 13:25:14 ON 15 APR 2006

L10 7 S L9  
L11 0 S PHOTORESIST AND L10

=> d l10 1-7 ti

L10 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN  
TI A two step, non-stereospecific cation radical Diels-Alder reaction

L10 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Stereospecificity and Mechanism in Cation Radical Diels-Alder and Cyclobutanation Reactions

L10 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN  
TI 7,7-Dimethoxytetrachloronorbornenol ethers

L10 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Vinyl ethers in diene synthesis. III. Synthesis of adducts of cyclopentadiene and hexachlorocyclopentadiene with vinyl ethers of phenols

L10 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Simple vinyl ethers in diene synthesis. I. Reaction of vinyl ethers of phenol, cresols, and halophenols with hexachlorocyclopentadiene

L10 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Vinyl compounds in Diels-Alder synthesis. III. Synthesis and properties of ethers of bicycloheptene series and di(endomethylene)octahydronaphthalene containing aromatic radicals

L10 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Vinyl compounds in Diels-Alder reaction. Stereospecific orientation of Diels-Alder reaction of vinyl aryl ethers with cyclopentadiene as related to temperature

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

6.10

351.07

FILE 'CAPLUS' ENTERED AT 13:27:32 ON 15 APR 2006

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

10/784,377

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 15 Apr 2006 VOL 144 ISS 17  
FILE LAST UPDATED: 14 Apr 2006 (20060414/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/infopolicy.html>

=> s norbon? and (hexfluoropropanol or trifluoromethyl carbinol)

120 NORBON?

1 HEXFLUOROPROPANOL

36938 TRIFLUOROMETHYL

8663 CARBINOL

31 TRIFLUOROMETHYL CARBINOL

(TRIFLUOROMETHYL(W)CARBINOL)

L12 0 NORBON? AND (HEXFLUOROPROPANOL OR TRIFLUOROMETHYL CARBINOL)

=> s norborn? and (hexfluoropropanol or trifluoromethyl carbinol)

27927 NORBORN?

1 HEXFLUOROPROPANOL

36938 TRIFLUOROMETHYL

8663 CARBINOL

31 TRIFLUOROMETHYL CARBINOL

(TRIFLUOROMETHYL(W)CARBINOL)

L13 3 NORBORN? AND (HEXFLUOROPROPANOL OR TRIFLUOROMETHYL CARBINOL)

=> d 1-3 ti

L13 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN

TI Equilibrium water uptake and diffusion behavior in model polynorbornene photoresist polymers

L13 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN

TI Effect of nanoscale confinement on the diffusion behavior of photoresist polymer thin films

L13 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN

TI Dissolution behavior of bis-trifluoromethyl-carbinol -substituted polynorbornenes

=> d 1-3 bib ab

L13 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:592339 CAPLUS

TI Equilibrium water uptake and diffusion behavior in model polynorbornene photoresist polymers

AU Hoskins, Trevor; Roman, Paul J.; Ludovice, Peter J.; Henderson, Clifford L.



CS Georgia Institute of Technology, School of Chemical & Biomolecular Engineering, Atlanta, GA, 30332-0100, USA  
SO Proceedings of SPIE-The International Society for Optical Engineering (2005), 5753(Pt. 2, Advances in Resist Technology and Processing XXII), 851-861

CODEN: PSISDG; ISSN: 0277-786X

PB SPIE-The International Society for Optical Engineering

DT Journal

LA English

AB As 193 nm immersion lithog. continues to evolve, the need to understand the effect of the immersing liquid on the resulting photoresist properties continues to grow. With this in mind, the sorption of water (using both liquid and vapor environments) in two model photoresist polymer resins based on functionalized poly **norbornene**) was examined using quartz crystal microbalance techniques. Similar to the results presented by Berger and coworkers, it was found that the water uptake in bis-**trifluoromethyl carbinol** substituted polynorbornene (HFAPNB) increases as the polymer mol. weight increases, while the diffusion coefficient of water in these materials remains relatively constant over the

same range in mol. weight. In contrast, trifluorosulfonamide-substituted polynorbornene displays a relatively constant level of water uptake as a function of polymer mol. weight, while the diffusion coefficient decreases by

more than an order of magnitude over the same mol. weight range. Sorption expts. performed as a function of temperature have shown that the water diffusion in these polynorbornene polymers can be described using an Arrhenius relationship. The activation energy of water diffusion was compared in both HFAPNB and poly(hydroxystyrene). The activation energy for diffusion of water in HFAPNB is substantially larger than in the case of poly(hydroxystyrene). This is consistent with the view that polynorbornenes possess relatively stiff and rigid backbones as compared to more flexible polymers such as poly(hydroxystyrene). The activation energy for water diffusion in HFAPNB was found to be a strong function of polymer mol. weight, with the activation energy decreasing with increasing mol. weight

RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:491242 CAPLUS

DN 142:454199

TI Effect of nanoscale confinement on the diffusion behavior of photoresist polymer thin films

AU Singh, Lovejeet; Ludovice, Peter J.; Henderson, Clifford L.

CS School of Chemical & Biomolecular Engineering, Georgia Institute of Technology, Atlanta, GA, 30332-0100, USA

SO Proceedings of SPIE-The International Society for Optical Engineering (2004), 5376(Pt. 1, Advances in Resist Technology and Processing XXI), 369-378

CODEN: PSISDG; ISSN: 0277-786X

PB SPIE-The International Society for Optical Engineering

DT Journal

LA English

AB The influence of film thickness and mol. weight on the diffusion coeffs. of water, benzene, and trifluoroacetic acid in two photoresist polymers, poly(p-hydroxystyrene) and bis-**trifluoromethyl carbinol** substituted poly(**norbornene**), has been studied using quartz crystal microbalance (QCM) methods. Diffusion coeffs. for films as thin as approx. 50 nm were determined. It was observed that the diffusion coefficient was a

strong function of film thickness, and that the diffusion coefficient decreases drastically as film thickness is reduced below a critical value. This critical

10/784,377

thickness value is found to be a function of both polymer structure and mol. weight. In addition, the effect of film thickness on the equilibrium uptake of the various penetrants was also determined. In particular, the equilibrium water uptake was shown to depend strongly on film thickness, polymer structure, and polymer mol. weight.

RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:570067 CAPLUS

DN 140:347337

TI Dissolution behavior of bis-trifluoromethyl-carbinol  
-substituted polynorbornenes

AU Hoskins, Trevor; Chung, Won Jae; Ludovice, Peter J.; Henderson, Clifford  
L.; Seger, Larry; Rhodes, Larry F.; Shick, Robert A.

CS Georgia Institute of Technology, Atlanta, GA, 30332-0100, USA

SO Proceedings of SPIE-The International Society for Optical Engineering  
(2003), 5039(Pt. 1, Advances in Resist Technology and Processing XX),  
600-611

CODEN: PSISDG; ISSN: 0277-786X

PB SPIE-The International Society for Optical Engineering

DT Journal

LA English

AB As features shrink below 100 nm, new exposure technologies such as 157 nm lithog. are being developed. One of the critical challenges in developing these new lithog. tools and processes is the development of appropriate resist materials that can be used at these lower exposure wavelengths. Creating organic resist polymer resins for 157 nm exposure is a particularly challenging issue since many organic functional groups absorb at this wavelength. It has been previously shown that fluorinated polymers may offer the required low optical absorbance needed to serve as resist resins for 157 nm lithog. In particular, there has been interest in bis-trifluoromethyl carbinol substituted polynorbornenes (HFAPNB) and similar materials for use in photoresists. The bis-trifluoromethyl carbinol group offers a base soluble group that is sufficiently transparent to be used at 157 nm. This work has focused on the dissoln. behavior and other characteristics of bis-trifluoromethyl carbinol substituted polynorbornenes. In particular, it was found that the dissoln. behavior of the HFAPNB homopolymer is strongly controlled by its ability to hydrogen bond with both neighboring chains and also other small mol. additives such as dissoln. inhibitors and photoacid generators. A detailed mol. level explanation for these effects is presented. The interaction of a series of com. photoacid generators with HFAPNB polymers are presented. The use of such information for the rational design of advanced resist materials using these polymers will be discussed.

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> log y

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

28.03

379.10

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

-2.25

-2.25

STN INTERNATIONAL LOGOFF AT 13:31:35 ON 15 APR 2006

10/784,377